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ATTACHMENT A

December 1st, 2004

Re: Amir SALAMA
US patent application serial No. 09/624,037

AMENDED SET OF CLAIMS SUBMITTED WITH THE AMENDMENT

FILED ON SEPTEMBER 23, 2004

1 (currently amended). A method for the oxidation of volatile organic compounds contained in gaseous effluents, comprising:

a) providing an electrical corona discharge reactor for producing ozone;

b) supplying an electric current to said reactor in order to generate corona discharge;

c) passing the gaseous effluents upstream of the corona discharge reactor through a condenser in order to reduce the amount of water contained in said gaseous effluents and through a filter in order to remove solid particles also contained in said gaseous effluents before said gaseous effluents are passed through said reactor;

d) then passing the gaseous effluents through said corona discharge reactor in order to oxidize the volatile organic compounds contained in the gaseous effluents by the ozone generated in ;

e) causing the gaseous effluents also to contact a metal catalyst in order to further oxidize volatile organic compounds contained in said gaseous effluents; and

f) subjecting the gaseous effluents also to UV radiation in order to further oxidize volatile organic compounds contained in said gaseous effluents.

2. (cancelled)

3. (cancelled)

4. (original) The method of claim 1, wherein the electrical corona discharge reactor comprises at least two spaced apart electrodes between which the gaseous effluents flow.

5. (original) The method of claim 4, wherein said electrodes are incorporated respectively into two concentric outer and inner cylinders, the outer cylinder forming an outer duct wherein the gaseous effluents flow, the inner cylinder being concentrically positioned inside the outer cylinder and being spaced apart and electrically insulated therefrom.

6. (original) The method of claim 5, wherein the outer cylinder has an inner surface and an outer surface, a first one of said electrodes being incorporated to the outer surface of the outer cylinder.

7. (original) The method of claim 6, wherein the outer surface of the outer cylinder is coated with an electrically conductive material and wherein the outer cylinder is made of a dielectric material.

8. (original) The method of claim 6, wherein said first electrode comprises a plurality of electrically conductive strips extending longitudinally on the outer surface of the outer cylinder, and wherein the outer cylinder is made of a dielectric material.

9. (original) The method of claim 5, wherein the inner cylinder has an outer surface provided with a plurality of protrusions.

10. (currently amended) The method of claim 5, wherein the inner cylinder is hollow and forms an inner duct wherein a flow of gas or liquid circulates.

11. (original) The method of claim 10, comprising the additional step of circulating a flow of gas or of liquid into the inner cylinder to regulate the temperature into the reactor.

12. (original) The method of claim 11, wherein said flow of gas or of liquid is a flow of a cooling gas or of a cooling liquid thereby reducing the temperature into the reactor.

13. (withdrawn) An electrical corona discharge reactor for the oxidation of volatile organic compounds contained in gaseous effluents, comprising at least two concentric spaced apart electrodes between which the gaseous effluents flow;

- an outer hollow cylinder incorporating a first electrode, the outer cylinder having an inner surface and an outer surface and forming an outer duct wherein the gaseous effluents flow, the outer surface of the outer cylinder incorporating said first electrode;
- an inner cylinder incorporating a second electrode and having an outer surface facing the inner surface of the outer cylinder, the inner cylinder being concentrically positioned inside the outer cylinder and being spaced apart and electrically insulated therefrom;

whereby ozone is produced between the two electrodes of said reactor when an electric current is supplied thereto, the ozone produced oxidising the volatile organic compounds contained in the gaseous effluents.

14. (withdrawn) The reactor of claim 13, wherein said first electrode comprises a plurality of electrically conductive strips extending longitudinally on the outer surface of the outer cylinder, and wherein the outer cylinder is made of a dielectric material.

15. (withdrawn) The reactor of claim 13, wherein the outer surface of the inner cylinder comprises a plurality of protrusions.

16. (withdrawn) The reactor of claim 13, wherein the outer surface of the inner cylinder has at least one section coated with a metal catalyst.

17. (withdrawn) The reactor of claim 13, wherein the inner cylinder is hollow and forms an inner duct inside and insulated from the outer duct, a flow of gas or of a liquid being capable to flow inside the inner duct in order to regulate the temperature into the reactor.

18. (withdrawn) The reactor of claim 17, wherein a flow of a cooling gas or of a cooling liquid circulates into the inner cylinder in order to lower the temperature into the reactor.

19. (withdrawn) The reactor of claim 13, wherein the outer cylinder is made of a UV permeable material and coated with a UV permeable electrically conductive material, and wherein the reactor further comprises at least one electric UV lamp capable of producing UV rays positioned close to the outer surface of the outer cylinder, said UV rays further oxidizing the volatile organic compounds remaining in the gaseous effluents flowing inside said reactor.

20. (withdrawn) An electrical corona discharge reactor for the oxidation of volatile organic compounds contained in gaseous effluents, comprising at least two concentric spaced apart electrodes between which the gaseous effluents flow:

- an outer hollow cylinder incorporating a first one of said electrodes, the outer cylinder having an inner surface and an outer surface and forming an outer duct wherein the gaseous effluents flow, the outer cylinder being made of a dielectric and UV permeable material and its outer surface being coated with a UV permeable electrically conductive material;
- a hollow inner cylinder concentrically positioned inside the outer cylinder and being spaced apart and electrically insulated therefrom, the hollow inner cylinder forming an inner duct inside and insulated from the outer duct, a flow of gas or of a liquid being capable to flow inside the inner duct in order to regulate the temperature into the reactor, the inner cylinder incorporating a second one of said electrodes and having an outer surface coated with a metal catalyst and facing the inner surface of the outer

cylinder, the outer surface of the inner cylinder comprising a plurality of protrusions;

- at least one electric UV lamp capable of producing UV rays positioned close to the outer surface of the outer cylinder;

whereby ozone is produced between the electrodes of said reactor when an electric current is supplied thereto, the ozone produced oxidising the volatile organic compounds contained in the gaseous effluents flowing inside said reactor, the metal catalyst and the UV rays further oxidising the volatile organic compounds remaining in the gaseous effluents.

21. (new) The method of claim 1, wherein steps e) and f) are carried out simultaneously with step d) within said corona discharge reactor.

ATTACHMENT B

December 1st, 2004

Re: Amir SALAMA
US patent application serial No. 09/624,037

AMENDED SET OF CLAIMS EMPHASIZING THE DELETION FROM AND ADDITION TO THE PREVIOUS SET OF CLAIMS

1. (currently amended) A method for the oxidation of volatile organic compounds contained in gaseous effluents, comprising:

a) providing an electrical corona discharge reactor [capable of] for producing ozone;

b) supplying an electric current to said reactor in order to generate corona discharge; [and]

c) passing the gaseous effluents upstream of the corona discharge reactor through a condenser in order to reduce the amount of water contained in said gaseous effluents and through a filter in order to remove solid particles also contained in said gaseous effluents before said gaseous effluents are passed through said reactor;

[c]d) [causing] then passing the gaseous effluents [to flow] through said corona discharge reactor [whereby] in order to oxidize the volatile organic compounds contained in the gaseous effluents [are oxidised] by the ozone [produced by] generated in [said corona discharge reactor[.];

e) causing the gaseous effluents also to contact a metal catalyst in order to further oxidize volatile organic compounds contained in said gaseous effluents; and

f) subjecting the gaseous effluents also to UV radiation in order to further oxidize volatile organic compounds contained in said gaseous effluents.

2. (cancelled)

3. (cancelled)

4. (original) The method of claim 1, wherein the electrical corona discharge reactor comprises at least two spaced apart electrodes between which the gaseous effluents flow.

5. (original) The method of claim 4, wherein said electrodes are incorporated respectively into two concentric outer and inner cylinders, the outer cylinder forming an outer duct wherein the gaseous effluents flow, the inner cylinder being concentrically positioned inside the outer cylinder and being spaced apart and electrically insulated therefrom.

6. (original) The method of claim 5, wherein the outer cylinder has an inner surface and an outer surface, a first one of said electrodes being incorporated to the outer surface of the outer cylinder.

7. (original) The method of claim 6, wherein the outer surface of the outer cylinder is coated with an electrically conductive material and wherein the outer cylinder is made of a dielectric material.

8. (original) The method of claim 6, wherein said first electrode comprises a plurality of electrically conductive strips extending longitudinally on the outer surface of the outer cylinder, and wherein the outer cylinder is made of a dielectric material.

9. (original) The method of claim 5, wherein the inner cylinder has an outer surface provided with a plurality of protrusions.

10. (currently amended) The method of claim 5, wherein the inner cylinder is hollow and forms an inner duct wherein a flow of gas or liquid **[**can circulate**]** <u>circulates</u>.

11. (original) The method of claim 10, comprising the additional step of circulating a flow of gas or of liquid into the inner cylinder to regulate the temperature into the reactor.

12. (original) The method of claim 11, wherein said flow of gas or of liquid is a flow of a cooling gas or of a cooling liquid thereby reducing the temperature into the reactor.

13. (withdrawn) An electrical corona discharge reactor for the oxidation of volatile organic compounds contained in gaseous effluents, comprising at least two concentric spaced apart electrodes between which the gaseous effluents flow;

- an outer hollow cylinder incorporating a first electrode, the outer cylinder having an inner surface and an outer surface and forming an outer duct wherein the gaseous effluents flow, the outer surface of the outer cylinder incorporating said first electrode;
- an inner cylinder incorporating a second electrode and having an outer surface facing the inner surface of the outer cylinder, the inner cylinder being concentrically positioned inside the outer cylinder and being spaced apart and electrically insulated therefrom;

whereby ozone is produced between the two electrodes of said reactor when an electric current is supplied thereto, the ozone produced oxidising the volatile organic compounds contained in the gaseous effluents.

14. (withdrawn) The reactor of claim 13, wherein said first electrode comprises a plurality of electrically conductive strips extending longitudinally on the outer surface of the outer cylinder, and wherein the outer cylinder is made of a dielectric material.

15. (withdrawn) The reactor of claim 13, wherein the outer surface of the inner cylinder comprises a plurality of protrusions.

16. (withdrawn) The reactor of claim 13, wherein the outer surface of the inner cylinder has at least one section coated with a metal catalyst.

17. (withdrawn) The reactor of claim 13, wherein the inner cylinder is hollow and forms an inner duct inside and insulated from the outer duct, a flow of gas or of a liquid being capable to flow inside the inner duct in order to regulate the temperature into the reactor.

18. (withdrawn) The reactor of claim 17, wherein a flow of a cooling gas or of a cooling liquid circulates into the inner cylinder in order to lower the temperature into the reactor.

19. (withdrawn) The reactor of claim 13, wherein the outer cylinder is made of a UV permeable material and coated with a UV permeable electrically conductive material, and wherein the reactor further comprises at least one electric UV lamp capable of producing UV rays positioned close to the outer surface of the outer cylinder, said UV rays further oxidizing the volatile organic compounds remaining in the gaseous effluents flowing inside said reactor.

20. (withdrawn) An electrical corona discharge reactor for the oxidation of volatile organic compounds contained in gaseous effluents, comprising at least two concentric spaced apart electrodes between which the gaseous effluents flow:

- an outer hollow cylinder incorporating a first one of said electrodes, the outer cylinder having an inner surface and an outer surface and forming an outer duct wherein the gaseous effluents flow, the outer cylinder being made of a dielectric and UV permeable material and its outer surface being coated with a UV permeable electrically conductive material;
- a hollow inner cylinder concentrically positioned inside the outer cylinder and being spaced apart and electrically insulated therefrom, the hollow inner cylinder forming an inner duct inside and insulated from the outer duct, a flow of gas or of a liquid being capable to flow inside the inner duct in order to regulate the temperature into the reactor, the inner cylinder incorporating a second one of said electrodes and having an outer surface coated with a metal catalyst and facing the inner surface of the outer cylinder, the outer surface of the inner cylinder comprising a plurality of protrusions;
- at least one electric UV lamp capable of producing UV rays positioned close to the outer surface of the outer cylinder;

whereby ozone is produced between the electrodes of said reactor when an electric current is supplied thereto, the ozone produced oxidising the volatile organic compounds contained in the gaseous effluents flowing inside said reactor, the metal catalyst and the UV rays further oxidising the volatile organic compounds remaining in the gaseous effluents.

21. (new) The method of claim 1, wherein steps e) and f) are carried out simultaneously with step d) within said corona discharge reactor.